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FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

| EXAMINER | |
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| HUNG, YUBIN | |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/668,389 | HENRY ET AL. | |
| | Examiner | Art Unit | |
| | Yubin Hung | 2624 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *04 October 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-7,9-16 and 18-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,9-16 and 18-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04 October 2007* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

***Response to Amendment/Arguments***

1. This action is in response to amendment filed 10/04/07, which has been entered.

2. Claims 8 and 17 have been canceled; currently claims 1-7, 9-16 and 18-28 are still pending.

3. In view of Applicant's amendment, the objection to the drawings and the specification has been withdrawn.

4. In view of Applicant's amendment, the 35 U.S.C. 101 rejection of claims 25-27 has been withdrawn. However, the 35 U.S.C. 101 rejection of claim 28 is maintained; see below.

5. Applicant's arguments with respect to claims 1 and 10 (see pp. 14-17 of the 10/04/07 response) have been considered but are moot in view of the new ground(s) of rejection. (However, applicant's argument in paragraphs 3-5 on page 15 warrants some discussion, see below. The argument in the first paragraph on page 16 is based on the added claim element and will not be addressed here. See the new 35 U.S.C. 103 rejection below instead.)

5.1 *(Re argument on P. 15, paragraphs 3-5) that Cloutier's teachings (regarding decoding during idle intervals) can only relate to a secondary operation and cannot apply to Easwar's transcoding because it is the main object*

However, "main" and "secondary" are subjective terms (a main object to someone at some time may be secondary to other person at another time) and in any event claims 1 and 10 do not include a limitation that requires transcoding to be the main object. Therefore the argument is not persuasive.

## *Claim Objections*

6. Claims 25 and 26 are objected to because of the following informalities:

- Claim 25, and similarly claim 26: "A computer-readable storage medium" should have been "The computer-readable storage medium"

Appropriate correction is required.

## *Claim Rejections - 35 USC § 101*

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), ANNEX IV, partly reads as follows:

### *First paragraph*

> Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structure and computer programs which impart functionality when employed as a computer component. ...

***Second paragraph***

> Both types of "descriptive material" are nonstatutory when claimed as descriptive material per se. ...

***Section (a), second paragraph, beginning at line 7***

> In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowery, 32 F.3d at 1583-84, 32 USPQ2d at 1035. ...

8. Claim 28 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claim 28 recites a computer program stored on a computer-readable storage medium. Therefore the claim is directed to a computer program *per se* (even though it is stored on a computer-readable storage medium), which is not statutory, instead of to a computer-readable storage medium (encoded with the program), which is statutory.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

**Part A**

**Note: The analyses for part A below apply to the versions of claims 3-9 as dependent from claim 1; claims 12-19 as dependent from claim 10; and claims 20-28 with respect to claims 1 or 10 as appropriate.**

10. Claims 1, 6, 9-10, 15, 18, 20, 21, 23-26 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Easwar (US 2004/0008897), and further in view of Cloutier et al. (US 5,847,771).

11. Regarding claim 10, and similarly claim 1 (since the device of claim 10 performs the method of claim 1), Easwar discloses an apparatus for transcoding digital data comprising

- means of transcoding the digital data coded according to the first coding mode into the digital data coded according to the second coding mode
  [Fig. 3, refs. 320 & 325 (transcoder); Fig. 4B; P. 7, paragraph 63,lines 11-19; P. 8, paragraphs 73-75. Note that JPEG (1st coding mode) is transcoded into to Wavelet (2nd mode)]
- wherein the second coding mode is a coding according to which data is coded by an amplitude curve representing the amplitude of the data along a path amongst the data
  [P. 9, paragraph 82, especially lines 18-25. Note that the coefficients (the values of which are their amplitudes) are further quantized and entropy-encoded in the second mode (wavelet-based). Note further that the entropy scheme recited in lines 23-25 typically uses a zigzag path to scan the data, as is also disclosed in P. 7, paragraph 70, especially lines 3-13, of Easwar. The zigzag sequence of the quantized coefficients constitutes an amplitude curve representing the amplitude of the data along a path (as defined by the zigzag traversal)]

Easwar does not expressly disclose the detection of inactivity of resources useful for transcoding and carrying out transcoding when inactivity is detected. However, Cloutier discloses detecting the inactivity of resources useful for an operation (e.g., decompression) and when detected, carrying out the operation [Fig. 3, ref. 75; Fig. 5,

refs. 75 (detecting inactivity), 104 (resource); Fig. 9, ref. 170 (period of inactivity); Col. 18, line 24-Col. 19, line 37, especially, Col. 19, lines 23-31].

Easwar and Cloutier are combinable because they both have aspects that are from the same field of endeavor of encoding.

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify Easwar with the teachings of Cloutier by detecting the inactivity of the useful resources before carrying out the desired operation. The motivation would have been for the intended operation (e.g., transcoding) to be successfully carried out while maintaining the system integrity (since a current task, if any, being executed in the resource will be terminated prematurely and leave the system in an uncertain state if a new task commences before the current task is complete).

Therefore it would have been obvious to combine Cloutier with Easwar to obtain the invention as specified in claim 10.

12. Regarding claim 15, and similarly claim 6, note that the first coding mode disclosed by Easwar is JPEG [Fig. 4B: ref. 410]

13. Regarding claim 18, and similarly claim 9, note that in Easwar the data coded according to a first format (JPEG) is a digital image [P. 7, paragraph 63, lines 11-13].

14. Regarding claims 20, 21 (digital data processing apparatuses) and claims 23, 24 (photographic apparatuses), note that per the analysis of claims 1 and 10 above, the apparatus shown in Fig. 3, ref. 310 of Easwar has been modified (by Cloutier) to comprise the transcoding means according to claim 10, which realizes the method of claim 1. Note further that the apparatus is a photographic apparatus; it is also a digital processing apparatus since it processes digital images.

15. Regarding claim 25, and similarly claim 28 (a storage medium is an information carrier), Easwar further discloses a storage medium [Fig. 2B, ref. 282; P. 5, paragraph 53, lines 8-11] capable of storing a program for implementing the method of claim 1. [Note that Fig. 2B is part of the general digital camera (which Fig. 3, ref. 310 is an instance of; see P. 7, paragraph 63, lines 1-4) disclosed in Fig. 1, ref. 100.]

16. Regarding claim 26, Easwar further discloses a detachably mountable medium [Fig. 2B, ref. 284; P. 6, paragraph 53].

*****

17. Claims 3, 4, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Easwar (US 2004/0008897) and Cloutier et al. (US 5,847,771) as applied to claims 1, 6, 9-10, 15, 18, 20, 21, 23-26 and 28 above and further in view of Kaneko et al. (US 6,671,454).

18. Regarding claim 12 and similarly claim 3, the combined invention of Easwar and Cloutier discloses all limitations of its parent, claim 10.

The combined invention of Easwar and Cloutier does not expressly disclose the following, but Kaneko does

- Means of selecting an order of transcoding of the digital data coded according to the first coding mode into the digital data coded according to the second coding mode
  [Fig. 17, refs. 154, 157; Col. 15, lines 20-28 & 55-61. Note that the order is based on the size]

The combined invention of Easwar and Cloutier is combinable with Kaneko because they both have aspects that are from the same field of endeavor of encoding.

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the combined invention of Easwar and Cloutier with the teaching of Kaneko as recited above. The motivation would have been to ensure a large free space, as Kaneko indicates in column 15, lines 60-61.

Therefore it would have been obvious to combine Kaneko with Easwar and Cloutier to obtain the invention as specified in claim 12.

19. Claim 13 (and similarly claim 4) is similarly analyzed and rejected as per claim 12 since the order disclosed by Kaneko is based on size [Col. 15, lines 60-61].

*****

20. Claims 5 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Easwar (US 2004/0008897), Cloutier et al. (US 5,847,771) and Kaneko et al. (US 6,671,454) as applied to claims 3, 4, 12 and 13 above, and further in view of Ishii et al. (US 5,675,789).

21. Regarding claim 14, and similarly claim 5, the combined invention of Easwar, Cloutier and Kaneko discloses all limitations of its parent, claim 12.

In addition, Ishii discloses selecting files to compress according to access frequency [Fig. 4, ref. 102; Col. 8, lines 32-42. Note that transcoding can involve decompression first (e.g., see Easwar: Fig. 4B, ref. 411)].

The combined invention of Easwar, Cloutier and Kaneko is combinable with Ishii because they both have aspects that are from the same field of endeavor of encoding.

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the combined invention of Easwar, Cloutier and Kaneko with the teaching of Ishii by selecting files according to access frequency. The motivation would have been to transcode the most desired (as indicated by the access frequency) file first since the communication between the requesting server and the transcoding device can and does get lost, and when that happens, the most desired file would most likely have already

been transcoded and transmitted. [See the wireless communication link 300 between device 310 and server 370 of Easwar's Fig. 3].

Therefore it would have been obvious to combine Ishii with Easwar, Cloutier and Kaneko to obtain the inventions as specified in claim 14.

*****

22. Claims 7 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Easwar (US 2004/0008897) and Cloutier et al. (US 5,847,771) as applied to claims 1, 6, 9-10, 15, 18, 20, 21, 23-26 and 28 above, and further in view of Joshi et al. (US 6,987,890).

23. Regarding claim 16, and similarly claim 7, the combined invention of Easwar and Cloutier discloses all limitations of its parent, claim 10.

The combined invention of Easwar and Cloutier does not expressly disclose using the JPEG 2000 standard for the first coding mode. However, Joshi discloses the use of JPEG 2000 [Col. 1, lines 14-34].

The combined invention of Easwar and Cloutier is combinable with Joshi because they both have aspects that are from the same field of endeavor of encoding.

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the combined invention of Easwar and Cloutier with the teaching of Joshi by using the JPEG 2000 standard for the first coding mode. The motivation would have been because it provides a very flexible framework for organizing and ordering the compressed bit stream, as Joshi indicates in column 1, lines 34-39.

Therefore it would have been obvious to combine Joshi with Easwar and Cloutier to obtain the inventions as specified in claim 16.

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24. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Easwar (US 2004/0008897) and Cloutier et al. (US 5,847,771) as applied to claims 1, 6, 9-10, 15, 18, 20, 21, 23-26 and 28 above, and further in view of Horie et al. (US 6,236,759).

Regarding claim 19, the combined invention of Easwar and Cloutier discloses all limitations of its parent, claim 10.

In addition, Horie discloses an image processing apparatus (with encoding and decoding units) comprising a processor, a ROM for storing programs and a RAM with registers [Fig. 1D, ref. 1141 (ALU, a processor), 1142 (ROM) and 1140 (RAM); Col. 9, lines 17-23].

The combined invention of Easwar and Cloutier is combinable with Horie because they both have aspects that are from the same field of endeavor of encoding.

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the combined invention of Easwar and Cloutier with the teaching of Horie by using the JPEG 2000 standard for the first coding mode. The motivation would have been to facilitating the operation of the apparatus, as Horie indicates in Col. 9, lines 17-18.

Therefore it would have been obvious to combine Horie with Easwar and Cloutier to obtain the inventions as specified in claim 19.

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25. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Easwar (US 2004/0008897) and Cloutier et al. (US 5,847,771) as applied to claims 1, 6, 9-10, 15, 18, 20, 21, 23-26 and 28 above, and further in view of Holliman et al. (US 2002/0116533).

26. Regarding claim 22, the combined invention of Easwar and Cloutier discloses all limitations of its parent, claim 20.

In addition, Holliman discloses having an apparatus with transcoding capability being part of a peer-to-peer network [Fig. 1 and P. 1, paragraph 10 (peer-to-peer); P. 3, paragraph 29 (transcoding)].

The combined invention of Easwar and Cloutier is combinable with Holliman because they both have aspects that are from the same field of endeavor of encoding.

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the combined invention of Easwar and Cloutier with the teaching of Holliman by having the apparatus as part of a peer-to-peer network. The motivation would have been because peer-to-peer network disclosed in Holliman offers advantages such as improved data/resource sharing and transparency of physical location of a resource, as Holliman indicates in P. 1, paragraphs 10 and 11.

Therefore it would have been obvious to combine Holliman with Easwar and Cloutier to obtain the inventions as specified in claim 22.

*****

27. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Easwar (US 2004/0008897) and Cloutier et al. (US 5,847,771) as applied to claims 1, 6, 9-10, 15, 18, 20, 21, 23-26 and 28 above, and further in view of Berstis (US 6,721,001).

28. Regarding claim 27, the combined invention of Easwar and Cloutier discloses all limitations of its parent, claim 25.

In addition, Berstis discloses having a floppy disk as a storage medium for a digital camera [Fig. 2, ref. 214 and Col. 3, lines 3-8].

The combined invention of Easwar and Cloutier is combinable with Berstis because they both have aspects that are from the same field of endeavor of image acquistion.

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the combined invention of Easwar and Cloutier with the teaching of Berstis by having a floppy disk as a storage medium. The motivation would have been for portability, as Berstis indicates in Col. 4, lines 58-60.

Therefore it would have been obvious to combine Berstis with Easwar and Cloutier to obtain the inventions as specified in claim 27.

**End of Part A**

**Part B**

**29. Note: The analyses for Part B below apply to claims 2, 11 and the versions of claims 3-7 and 9 as dependent from claim 2; claims 12-16, 18 and 19 as dependent from claim 11; and claims 20-27 with respect to claims 2 or 11 as appropriate.**

30. Claims 2 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Easwar (US 2004/0008897), Cloutier et al. (US 5,847,771) as applied to claims 1, 6, 9-10, 15, 18, 20, 21, 23-26 and 28 above, and further in view of Lai et al. (US 6,407,680).

31. Regarding claim 11, and similarly claim 2 (since the device of claim 11 performs the method of claim 2), the combined invention of Easwar and Cloutier discloses all limitations of its parent, claim 10.

The combined invention of Easwar and Cloutier does not expressly disclose the following

- means of detecting a request demanding data coded according to the first coding mode
- means of verifying that the data demanded are coded according to the second coding mode
- means of transcoding the data coded according to the second coding mode into data coded according to the first coding mode, if the response at the verification step is positive

However, Lai discloses an apparatus [Fig. 1, ref. 106 and Fig. 2; Col. 7, lines 32-53] that has a means for detecting a request for data in a first coding mode which also serves as

a means for verifying that the demanded data are coded according to a second coding mode [Fig. 2, ref. 206 (the means); Fig. 5A, ref. 504 (detecting) and Fig. 5B, ref. 520 (verifying); Col. 9, lines 53-61; Col. 14, lines 57-Col. 15, line 8; Col. 14, line 55-Col. 15, line 8; Col. 17, lines 31-42. Note that the source and the destination types are considered the second and the first modes, respectively]. The apparatus also has a means for transcoding from the source type (i.e., the second mode) into the destination type (i.e., the first mode) [Fig. 2, ref. 218 & Fig. 5B, ref. 522; Col. 17, lines 31-42].

The combined invention of Easwar and Cloutier is combinable with Lai because they both have aspects that are from the same field of endeavor of encoding.

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the combined invention of Easwar and Cloutier with the teaching of Lai by detecting the coding mode of the requested data and if it is different from the existing mode the data is coded, then performs the appropriate transcoding. The motivation would have been to avoid unnecessary transcoding (and thereby improve efficiency) because if the requested data already exists in the desired mode (i.e., type), then it can be delivered without transcoding, as Lai indicates in Col. 17, lines 31-36.

Therefore it would have been obvious to combine Lai with Easwar and Cloutier to obtain the invention as specified in claim 11.

32. Regarding claims 3-7, 9, 12-16 and 18-27, the corresponding analyses in Part A can and are applied (and are not repeated here) to modify the combined invention of Easwar, Cloutier and Lai to obtain the inventions as specified by the respective claims.

**End of Part B**

***Conclusion and Contact Information***

33. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

34. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

35. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yubin Hung whose telephone number is (571) 272-7451. The examiner can normally be reached on 7:30 - 4:00. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew C. Bella can be reached on (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

36. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Yubin Hung
Patent Examiner
Art Unit 2624

December 20, 2007